

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for use in a well, comprising:
measuring a characteristic of a supply of fluid used to actuate a downhole tool via a control line, the measuring being accomplished with a first sensor;
measuring the characteristic with a second sensor in or near a downhole tool and spaced from the supply measurement, the downhole tool being actuated via the a control line;
comparing the measurements output by the first and second sensors to determine whether fluid is properly supplied to the downhole tool; and
locating the second a sensor, ~~for measuring the characteristic in or near the downhole tool;~~ separate from the control line used to actuate the downhole tool.
2. (Original) The method of claim 1, further comprising verifying a function of the downhole tool using the comparison.
3. (Original) The method of claim 1, further comprising verifying that the downhole tool has set using the comparison.
4. (Original) The method of claim 1, further comprising verifying that a fluid from the supply is reaching the downhole tool.
5. (Currently amended) The method of claim 1, further comprising measuring a

characteristic within the downhole tool using the second a sensor that is external to the downhole tool.

6. (Previously presented) The method of claim 1, wherein the supply is a downhole supply.
7. (Previously presented) The method of claim 1, wherein the supply is positioned at a surface of the well.
8. (Currently amended) The method of claim 1, wherein the step of measuring the characteristic in or near the downhole tool is performed using the second a sensor located within the downhole tool.
9. (Currently amended) The method of claim 1, wherein the step of measuring the characteristic in or near the downhole tool is performed using the second a sensor located externally to the downhole tool.
10. (Currently amended) The method of claim 1, wherein the step of measuring the characteristic in or near the downhole tool comprises measuring the characteristic in the a control line that is in fluid communication with the downhole tool.
11. (Canceled)

12. (Canceled)
13. (Currently amended) The method of claim 1, wherein the first sensor and the second sensor form measuring steps are made using a differential sensor.
14. (Original) The method of claim 1, wherein the characteristic is pressure.
15. (Original) The method of claim 1, further comprising deploying mitigation measures based upon the comparison.
16. (Original) The method of claim 1, further comprising:
inserting the downhole tool, comprising a hydraulically set packer connected to a tubing,
into the well;
providing fluid communication from an interior of the tubing to a setting chamber of the
packer via a packer setting line;
the measuring a characteristic of the supply step comprising measuring a pressure of the
interior of the tubing near an inlet to the packer setting line.
17. (Original) The method of claim 16, wherein the measuring the characteristic in or
near the downhole tool step comprises measuring the pressure in the packer setting line.
18. (Original) The method of claim 16, wherein the measuring the characteristic in or
near the downhole tool step comprises measuring the pressure in the setting chamber of

the packer.

19. (Original) The method of claim 16, further comprising measuring a tubing pressure via the packer setting line.
20. (Original) The method of claim 1, wherein the downhole tool is hydraulically actuated.
21. (Original) The method of claim 1, wherein the downhole tool is a packer.
22. (Currently amended) A system for use in a well, comprising:
a sensor system of one or more sensors adapted to measure a characteristic of a supply
and adapted to measure the characteristic in or near a downhole tool at a position
that is spaced from the supply measurement, the one or more sensors being
connected to a plurality of sensing locations, the connection to one or more of the
plurality of sensing locations being formed by one or more dedicated snorkel
lines.
23. (Original) The system of claim 22, wherein the system of one or more sensors
comprises a differential sensor.
24. (Original) The system of claim 22, further comprising:
a first sensor adapted to measure the characteristic of a supply;

a second sensor adapted to measure the characteristic in or near the downhole tool, the second sensor measuring the characteristic at the position that is spaced from the supply measurement.

25. (Original) The system of claim 24, wherein the second sensor is positioned external to the downhole tool.
26. (Original) The system of claim 24, wherein the second sensor is positioned within the downhole tool.
27. (Original) The system of claim 24, further comprising:
a control line in fluid communication with the downhole tool and the supply;
the second sensor is adapted to measure the characteristic in the control line.
28. (Original) The system of claim 24, further comprising:
the downhole tool having an internal chamber;
the second sensor is adapted to measure the characteristic in the internal chamber.
29. (Original) The system of claim 24, wherein the second sensor is further adapted to measure the characteristic of the supply.
30. (Previously presented) The system of claim 22, wherein the supply is a downhole supply.

31. (Original) The system of claim 22, wherein the characteristic is pressure.
32. (Original) The system of claim 22, wherein the one or more sensors are pressure gauges.
33. (Original) The system of claim 22, further comprising:
a completion tubing;
the downhole tool comprises a packer connected to the completion tubing, the packer
having a setting chamber.
34. (Original) The system of claim 33, wherein the sensor system comprises a sensor adapted to measure the characteristic in the setting chamber.
35. (Original) The system of claim 33, further comprising:
a packer setting line in fluid communication the packer setting chamber;
the sensor system comprises a sensor adapted to measure the characteristic in the packer
setting line.
36. (Original) The system of claim 22, further comprising:
a lower completion in the well;
an upper completion above the lower completion;
an isolation system between and in fluid communication with the lower completion and

the upper completion, the isolation system is adapted to selectively fluidically isolate the lower completion from the upper completion;

the upper completion comprising:

a packer comprising the downhole tool, the packer having a setting chamber therein;

a gauge mandrel below the packer that has the one or more sensors therein;

an annular control valve below the gauge mandrel;

an in-line control valve below the annular control valve;

a packer setting line in fluid communication with the setting chamber of the packer and an interior passageway of the upper completion at a position below the in-line control valve;

a pressure sensor in the gauge mandrel in fluid communication with the packer setting line adapted to measure a pressure in the control line.

37. (Original) The system of claim 36, further comprising a pressure sensor in the gauge mandrel in fluid communication with the interior passageway of the upper completion at a position below the in-line control valve.

38. (Previously presented) A well completion system, comprising:
a completion tubing;
a packer connected to the completion tubing, the packer having a setting chamber therein;
a packer setting line providing fluid communication between the completion tubing and the packer setting chamber;

an in-line control valve to control production through the completion tubing; and
a pressure gauge adapted to measure a pressure in the packer setting line.

39. (Original) The system of claim 38, further comprising a second pressure gauge adapted to measure a pressure in the completion tubing.